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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/318,614	05/26/1999	HIDEFUMI OKADA	990531	1681

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EXAMINER

GENCO, BRIAN C

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 09/03/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

6

Office Action Summary

Application No.

09/318,614

Applicant(s)

OKADA, HIDEFUMI

Examiner

Brian C Genco

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 37-46 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 37-46 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Application/Control Number: 09/318,614
Art Unit: 2615

Applicant's amendment filed June 13, 2003 has been fully considered by the examiner but is not deemed to be persuasive.

Applicant argues that Anderson does not disclose writing with the second writer to the first memory at intervals of writing by said first writer.

In response, examiner directs applicant to the original rejection presented in the previous office action. Examiner notes that the same argument can be made with respect to claim 13, namely that the second writer writes to the first memory every time the first writer completes writing the first image data to the first memory. Therefore the interval of writing is the full interval of writing the first image data to the first memory.

Examiner notes that all rejections based on canceled claims are herein withdrawn and new rejections are being presented for new claims.

Examiner's Notes

Examiner notes the rejection of claim 23 in the previous office action. The official notice presented in the previous action stating that it is very well known and established in the art to use an SDRAM instead of a DRAM was not traversed and is accordingly taken as an admission of the fact noted.

Claim Objections

Claim 46 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Examiner notes that the limitation of the recorder as broadly as

Art Unit: 2615

claimed in claim 46 recording to a recording medium does not further limit writing to a first memory. Namely the recorder could be broadly read on the first and second writers and the recording medium could be broadly read on the first memory.

Claim 45 is objected to because of the following informalities: Applicant repeats the phrase "to said first memory" twice in a row on line 4 of claim 45. Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claim 39 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In regards to claim 39 there is no support in the specification or the drawings that the second writer writes to the first memory during a horizontal blanking period. Examiner notes that the only support for writing during the horizontal blanking period is found in Fig. 7A and described on page 12, lines 7-9. Examiner notes that this describes writing thumbnail image data from the buffer 36 disclosed in Fig. 1 to the SDRAM 44 disclosed in Fig. 1 during the horizontal blanking period. Examiner further notes that there is no support in the specification for there being two separate writers for writing original image data and thumbnail image data to the SDRAM. Examiner notes that the only support for having the claimed two writers is the two writers for writing original image data and thumbnail image data to the buffer.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 37 and 46 are rejected under 35 U.S.C. 102(e) as being anticipated by (USPN 5,933,137 to Anderson).

In regards to claim 37 Anderson discloses a digital camera, comprising:

an imaging device for imaging a subject and outputting first image data having a first resolution (e.g., camera 110 wherein imaging device 114 generates raw image data having a first resolution; column 10, lines 13-18);

a first writer for intermittently writing a first memory the first image data outputted from said imaging device (e.g., RAM spooler 1 intermittently writes to the RAM disk raw image data, namely every time raw image data is captured);

a generator for generating second image data having a second resolution which is lower than the first resolution based on the first image data outputted from said imaging device (e.g., generating scrennail, thumbnail, and compressed image data which are all of lower resolution than the raw image data; column 9, lines 5-38); and

a second writer for writing the second image data generated by said generator to said first memory at intervals of writing by said first writer (e.g., RAM spooler 2 writes the scrennail, thumbnail, and compressed image to the RAM disk after the raw image data is written to the RAM disk; column 10, lines 13-40).

In regards to claim 46 Examiner notes that RAM disk is a recording medium.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 38 and 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over (USPN 5,933,137 to Anderson).

In regards to claim 38 note examiners rejection of claim 25 in the previous office action. The official notice presented in the previous action stating that it is very well known and established in the art to output image data by a raster scan scheme was not traversed and is accordingly taken as an admission of the fact noted. As such it would have been obvious to one of ordinary skill in the art to output image data in a raster scan manner.

In regards to claim 39 it is very well known and established in the art to perform data flow operations of data during the vertical blanking interval so as to not interfere with the outputting of image data from an image sensor. Official notice is taken. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have written the second image data to said first memory during a horizontal blanking period in order to not interfere with the outputting of image data from an image sensor.

Claims 40 and 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over (USPN 5,933,137 to Anderson) in view of (USPN 6,438,320 to Hatanaka).

In regards to claim 40 Examiner is interpreting the claim limitations to mean writing a main image, first image data, having for example 480 lines (a first number), to a first memory. A thumbnail image, second image data, is written to the memory every time the first image data

Art Unit: 2615

writes for example 2 lines (a third number). Therefore the thumbnail would have half the number of lines as the main image, or 240 lines (a second number). Note that the third number is less than the first number. As such, when the first line of the main image is written the first line of the thumbnail is written; when the third line of the main image is written the second line of the thumbnail is written, etc. as shown in the table below:

<u>Main</u>		<u>Thumbnail</u>
1	→	1
3	→	2
:	→	:
479	→	240

Examiner further notes that the thumbnail corresponds to any one of horizontal lines 1, 3, 5, ..., 239 (a fourth number) of the main image, namely lines 1-120 of the thumbnail image respectively.

Anderson does not disclose nor preclude writing the thumbnail in this way. Hatanaka discloses that an image pickup unit generates main image data and simultaneously generates thumbnail image data (column 4, lines 10-14). One skilled in the art would clearly recognize that this would increase the frame rate possible for the camera by reducing the amount of time spent on post processing. Hatanaka does not disclose how this operation would take place however one skilled in the art would recognize that the above mentioned method would be anticipated by the broad teaching of Hatanaka. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have used the method described above for writing the main image and thumbnail simultaneously in order to increase the frame rate possible for the camera by reducing the amount of time spent on post processing.

Art Unit: 2615

In regards to claim 41 see examiners notes on the rejection of claim 40. Note that the fourth number corresponds to the third number, namely that the fourth number is spaced out every third number of lines, e.g., fourth number horizontal lines 1, 3, 5, ..., 239 are spaced out every third number or every two lines.

Claims 42, 43, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over (USPN 5,933,137 to Anderson) in view of (USPN 6,438,320 to Hatanaka) in view of (USPN 5,138,454 to Parulski).

In regards to claim 42 neither Anderson nor Hatanaka disclose nor preclude a vertical counter.

It is known in the art to have a vertical counter to count a vertical number of lines of said original image data and output a vertical count value as taught by Parulski in elements 125 and 126 of Fig. 5. Examiner notes that neither Anderson nor Hatanaka disclose how the thumbnail image data is extracted from the main image. Therefore it would have been obvious to use the thinning techniques disclosed in Parulski, namely using vertical and horizontal counters, in order to afford "rapid display of a selected low resolution portion of the photoprint image" and "permits displaying the contents of the ... image in a variety of formats for optimizing the manner in which the imaged photoprint may be digitized and stored (column 3, lines 14-21, Parulski)."

In regards to claim 43 note column 8, lines 9-27; column 9, line 63 – column 10, line 37; and Fig. 7.

In regards to claim 45 Examiner notes that Anderson discloses the thumbnail image data is generated with data in the frame buffers 536 and then stored in the working memory 530 (Fig. 4A; column 9, lines 14-24). Examiner is defining the frame buffers and working memory as the second memory. As noted above the thumbnail image data is written to the first memory whenever the vertical counter has counted the third number, namely every other line. Therefore the thumbnail is written from the second memory to the first every time the counter counts to two.

Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over (USPN 5,933,137 to Anderson) in view of (USPN 6,438,320 to Hatanaka) in view of (USPN 5,138,454 to Parulski) in further view of (USPN 4,745,577 to Ogawa et al).

In regards to claim 44 see examiners notes on the rejection of claim 43. It is well known in the art to intermittently enable a plurality of registers to shift the image data by a predetermined number of pixels a time as taught by Ogawa et al, herein Ogawa. Anderson in view of Parulski discloses the use of RAM memories shown in Fig. 5 to extract predetermined data from said original image data. Ogawa discloses using a plurality of shift registers to read data into and data from a video RAM in order to facilitate parallel access to the video RAM (column 1, lines 36-41).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have included a plurality of registers to shift original image data by a predetermined number of pixels a time, namely the number of pixels able to be held in the shift register in order to facilitate parallel access to the video RAM. Note that Parulski discloses that "the addressing

Art Unit: 2615

of memories 121 and 122 is controlled in accordance with the count values of line (row) and pixel (column) clock counters 125, 127 and 126, 128 respectively (column 9, lines 63-66),” wherein the reading and writing of a RAM is controlled in accordance with the addressing and thus the registers are controlled by the addressing which is based on the count values. Ogawa discloses that exclusive registers are used, or enabled, based on whether a read or a write operation is being preformed, thus if the count values are less than all of the pixels of original image data a write operation would be preformed in order to write the data to be used as thumbnail image data into the RAM, if the count values are equal to all of the pixels of original image data a read operation would be preformed in order to obtain the image data to be used as thumbnail image data from the RAM (column 3, lines 59-63).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 2615

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

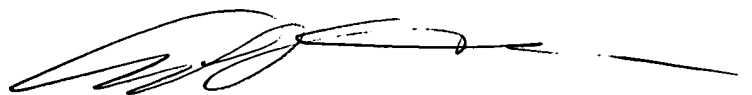
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian C. Genco who can be reached by phone at 703-305-7881 or by fax at 703-746-8325. The examiner can normally be reached on Monday thru Friday 8:00am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen can be reached on 703-308-9644. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology center 2600 customer service office whose telephone number is 703-306-0377.

August 25, 2003

Brian C Genco
Examiner
Art Unit 2615



**ANDREW CHRISTENSEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**